



# Link-16 Land-Based Tactical Antenna Set

**SPAWAR**



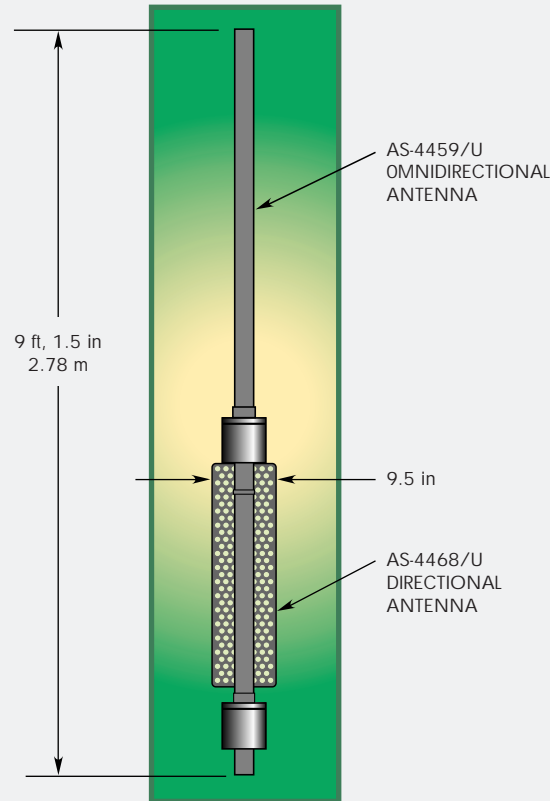
*Systems Center  
San Diego*

# Link-16 Land-Based Tactical Antenna Set

The OE-547/U is a Link-16 Land-Based Tactical Antenna Set for installations where high-gain and jammer rejection are required. The OE-547/U antenna set was designed and used for the USAF Mobile Command Equipment-JTIDS Module (MCE-JM). It is the Link-16 antenna system used when high-gain, high-performance tactical data links are required.

The OE-547/U is a set of two antennas: an omnidirectional antenna (AS-4459/U) designed to produce a minimum gain of 6.0 dBi with an approximate cosecant-squared beam shape to ensure maximum signal reception from distant aircraft at various elevation angles, and a directional antenna (AS-4468/U) designed to produce a minimum 15-dB front-to-back ratio for jammer rejection with a typical gain of 11.0 dBi at the horizon in the directional beam for enhanced receive function. Both antennas are designed to handle the maximum Link-16 transmit power of 1000 W peak/220 W average, but typical MCE-JM installations use the omnidirectional antenna as a transmit-receive antenna and the directional antenna as a receive-only antenna.

The OE-547/U antenna set is supplied with an 81-inch by 22-inch by 15.6-inch transit case and can be assembled and disassembled in the field with quick-release pins and clamps. The OE-547/U antennas are designed to mount on a 10- or 40-foot MCE-JM mast assembly, clamped and pinned to a 2.47-inch-diameter cylindrical masthead. The individual antennas can be mounted individually or colinearly by using a built-in colinear mount.



The OE-547 Antenna Set



The OE-547/U mounted on a 10-ft mast on top of an MCE-JM Shelter

## MECHANICAL SPECIFICATIONS

- MIL-STD-810 compliant for ground-mounted equipment

## ENVIRONMENTAL SPECIFICATIONS

- Meets MIL-STD-2036

## WEIGHT

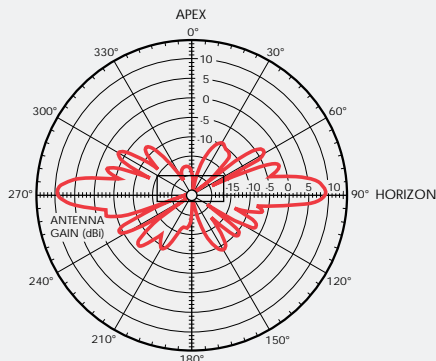
- In shipping container: 116 lb
- OE-547/U Assembly: 35.5 lb
- AS-4459/U (Omnidirectional): 14.75 lb
- AS-4468/U (Directional): 20.75 lb

## HEIGHT

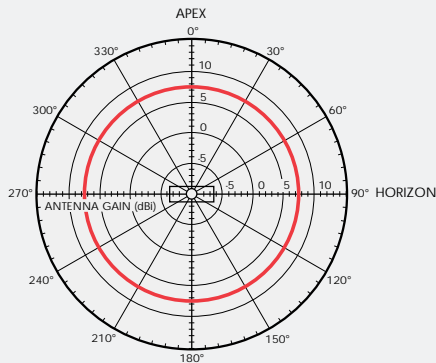
- OE-547/U Assembly: 9 ft, 1.5 in
- AS-4459/U: 5 ft, 4.9 in
- AS-4468/U: 4 ft, 0.2 in

## ELECTRICAL SPECIFICATIONS

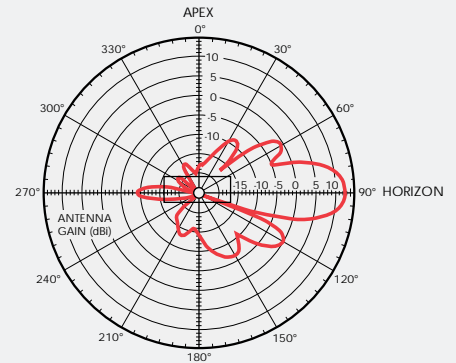
- Operating Frequency Band:  
960 MHz to 1215 MHz
- Minimum Gain at Horizon:  
6.0 dBi (AS-4468/U typical main-  
beam gain = 11 dBi)
- Elevation Pattern:  
Approximate cosecant-squared
- Azimuth Pattern:  
AS-4459/U: Omnidirectional  
AS-4468/U: Directional with minimum  
15-dB front-to-back ratio



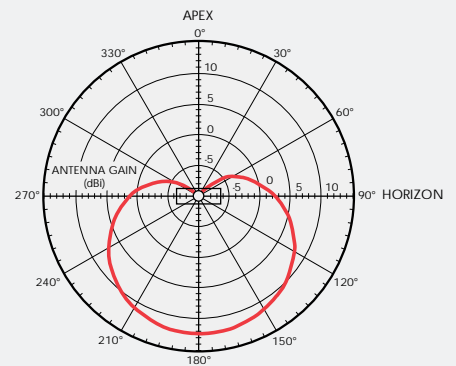
*Elevation Pattern of Omnidirectional Antenna  
(AS-4459/U) at 1088 MHz*



*Azimuth Pattern of Omnidirectional Antenna  
(AS-4459/U) at 1088 MHz*



*Elevation Pattern of Directional Antenna  
(AS-4468/U) at 1088 MHz*



*Azimuth Pattern of Directional Antenna  
(AS-4468/U) at 1088 MHz*

### For further information, please contact:

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Reviewed and approved by

Executive Officer/Base Operations Manager  
Space and Naval Warfare Systems Center, San Diego  
SD 067, May 1998

This technology may be covered by an invention disclosure assignable to the U.S. Government. Parties interested in licensing this technology may direct inquiries to:

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